

only shows that the animal was immune. His experiments showed that the poison (tetanus) and the antitoxin did not actually act on each other, but that they act separately upon the organism. The antagonism exists only in so far that the antitoxin makes the organism, the cells, and tissues able to resist the toxins—a true immunity. He finds substantiation for his results in the work of Centanni, Tizzoni, and Cantani.

The antitoxic serum must be of great power, according to Behring, to destroy the working of a small dose of specific poison.

Behring's explanation of the nature of the antitoxin as a product of reaction in the animal body is contradicted by Buchner, he believing that the antitoxin is a bacterial product—a changed toxalbumin.

CASE OF TUMOR OF THE SPINAL DURA MATER.

RANSOM and THOMPSON (*Brit. Med. Journ.*, February 24, 1894) report a case in which an extra-dural tumor was located in the region of the fifth dorsal vertebra. There was moderate, dull, aching, inconstant pain and was distinctly separated from the area of complete anæsthesia. There was complete paralysis preceded by a spastic condition. There was localized complete sensory loss and only slight and transient hyperæsthesia. The operation disclosed a tumor, bluish and lobulated, in the position of the extra-dural fat. It was readily separable from the dura and bones. The dura beneath it was markedly depressed. It measured about one and a half inches in length and *in situ* three-fourths inch broad.

Four vertebral laminæ were removed to expose the tumor, the canal being opened too low down at first. The wound was frequently irrigated with a 1:2000 perchloride of mercury solution and, just before closing, with iodized water. The growth was found to be a round-celled sarcoma. The patient's condition after the operation was not very good, and he died the third day after operation. The post-mortem showed that there had been no attempt at healing and the wound was in an unhealthy, septic condition. There was no involvement of the cord, though there were some slight signs of disorganization.

SUPRAPUBIC CYSTOTOMY.

SOUTHAM (*Brit. Med. Journ.*, January 13, 1894), in a clinical lecture, relates six cases of suprapubic cystotomy, of which four were performed for calculi, one for tumor of the bladder, and one for chronic cystitis accompanied by hæmaturia. Three of the stone operations were performed for hard stones in aged patients with greatly enlarged intra-vesical prostates. The author's reasons for preferring this method in these cases are: The difficulty of crushing and evacuating calculi from the pouch behind an enlarged prostate; the irritation and injury consequent upon the introduction and manipulation of the instruments; the hardness of the stones would necessitate a prolonged operation and be followed by shock, which was to be avoided in aged patients. Lateral lithotomy was precluded by the size and vascularity of the prostate. The fourth case, a boy, aged eleven, had a calculus one and one-fourth by seven-eighths inches. The suprapubic operation was used on account of the irritability of the urethra. The fifth case, a papilloma of the

bladder, was too large to remove *per urethram* in the female patient in whom it occurred. In the sixth, a chronic hemorrhagic cystitis, the suprapubic operation gave a chance to inspect the bladder, and a diverticulum that could not be felt was seen, ulcers touched with caustic, the bladder drained, and the patient made a good recovery.

ENTERO-VESICAL FISTULA TREATED BY LAPARO-ENTERECTOMY.

AN interesting and rare case of entero-vesical fistula is reported by HEUSTON (*Brit. Med. Journ.*, February 24, 1894). The patient, a stout, full-blooded man of thirty-six, had two attacks of influenza, and apparently never fully recovered his strength. A year afterward he noticed that portions of feces and gas were passed *per urethram*. Examination with a sound disclosed nothing; milk injections into the bladder did not show in the stools, but an injection *per rectum* of sodium salicylate, and the urine tested a few minutes later by perchloride of iron, showed a relatively large quantity of sodium salicylate in the urine.

A laparotomy was performed; a fistula the size of a pea found; the bladder wound closed; and the intestine, which contained a cylindrical neoplasm, resected. This growth proved to be, under the microscope, a columnar epithelioma. The patient rallied well, but died with all the symptoms of collapse on the fourth day. The autopsy showed peritonitis to be absent and that the operation had been successful.

A CASE OF PSEUDARTHROSIS OF THE UPPER ARM.

IN speaking of the methods of treatment in such cases, v. EISELBERG calls special attention to the Gussenbauer clamp, which he considers a simple and efficient method of holding the bones firmly in position. Many complicated methods have been recommended, and in late years methods by Bircher, Wille, Dollinger, Senn, and Cholot. The author considers this method superior to all the others on account of its simplicity and ease of application. The clamp consists of a bar having two prongs perpendicular to it at either end; they are sharp and three-sided.

Two small incisions are made down to the bone, one above and the other below the seat of fracture, and the clamp is driven into place while the ends of the bone are held closely in contact. Five or six sizes should be kept on hand. They have been used with great satisfaction for years in Billroth's clinic. The absolute fixation that is given by the use of this clamp insures a sufficient blood-supply to the lower fragment by giving absolute rest, and the lesser interference of the small points of the clamp than is found in the use of an ivory pin.

A LARGE CEREBRAL TUMOR WITHOUT HEADACHE AND WITH NORMAL EYE-GROUND.

PEL (*Berlin. klin. Wochenschrift*, 1894, No. 5) reports an interesting case of a cerebral tumor. The primary symptoms of paræsthesia of the fingers in the right hand were followed by paralysis, which extended over the hand and forearm. Not until a year later did paralysis of the right leg follow,